

	U	1	Document ID	Issue Date	Page s
1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5958367 A	19990928	52
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WO 9818884 A2	19980507	34
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WO 9815500 A	19980505	120
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WO 9631434 A	19961010	53

	Title	Current OR	Current XRef
1	Methods for preparing porous metal oxides	423/701	423/702; 423/703; 423/704; 423/705; 423/706; 423/707; 423/708; 423/713
2	NANOSTRUCTURED AQUEOUS FUELS		
3	Stable, hexagonally packed, mesoporous metal oxide molecular sieves - have a well defined structure, are resistant to pore collapse on removal of the templating molecule and are thermally stable		
4	Prod'n. of hexagonally packed mesoporous metal oxide(s) for e.g. catalysts - where the mesostructures are resistant to pore collapse after removal of surfactants and are thermally stable		

	Retrieval 1 Classif	Inventor	S	C	P	2	3	4	5
1		Ying, Jackie Y. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		YING, JACKIE Y et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		ANTONELLI, D M et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		ANTONELLI, D M et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Image Doc. Displayed	PT
1	US 5958367	<input type="checkbox"/>
2	WO 9818884 A2	<input type="checkbox"/>
3	WO 9815500 A1	<input type="checkbox"/>
4	WO 9631434 A1	<input type="checkbox"/>

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 12254-17-0 REGISTRY
CN Aluminum barium oxide (Al12BaO19) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Aluminate (Al12O192-), barium (1:1)
CN Aluminum barium oxide (BaAl12O19) (8CI)
CN Barium aluminate (BaAl12O19) (6CI, 7CI)
OTHER NAMES:
CN Barium aluminum oxide (BaAl12O19)
CN Barium hexaaluminate
CN Barium hexaaluminate (BaAl12O19)
DR 259686-57-2
MF Al . Ba . O
AF Al12 Ba O19
CI TIS
LC STN Files: CA, CAOLD, CAPLUS, CEN, IFICDB, IFIPAT, IFIUDB, PROMT,
TOXCENTER, USPAT2, USPATFULL

Component	Ratio	Component Registry Number
O	19	17778-80-2
Ba	1	7440-39-3
Al	12	7429-90-5

265 REFERENCES IN FILE CA (1962 TO DATE)
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
266 REFERENCES IN FILE CAPLUS (1962 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d his

(FILE 'HOME' ENTERED AT 12:59:12 ON 20 DEC 2002)

FILE 'REGISTRY' ENTERED AT 12:59:19 ON 20 DEC 2002
L1 1 S BARIUM HEXAALUMINATE

=> s l1

L2 265 L1

=> s nanometer# or millimicron# or micron#

14775 NANOMETER#

107 MILLIMICRON#

14261 MICRON#

L3 28784 NANOMETER# OR MILLIMICRON# OR MICRON#

=> s nm

L4 430888 NM

=> d 1

L4 ANSWER 1 OF 430888 CA COPYRIGHT 2002 ACS
AN 137:392677 CA
TI Design and performance of a microchip electrophoresis instrument with
sensitive variable-wavelength fluorescence detection
AU Belder, Detlev; Deege, Alfred; Maass, Martin; Ludwig, Martin
CS Abteilung fur Chromatographie, Max-Planck-Institut fur Kohlenforschung,

Mulheim an der Ruhr, D-45470, Germany
SO Electrophoresis (2002), 23(14), 2355-2361
CODEN: ELCTDN; ISSN: 0173-0835

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s 12 and 13

L5 2 L2 AND L3

=> d bib,ab 1-2

L5 ANSWER 1 OF 2 CA COPYRIGHT 2002 ACS

AN 137:81046 CA

TI Synthesis of **nanometer**-sized particles by reverse micelle mediated techniques

IN Ying, Jackie Y.; Zarur, Andrey

PA Massachusetts Institute of Technology, USA

SO U.S., 20 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 6413489	B1	20020702	US 1998-60733	19980415
	US 2002110519	A1	20020815	US 2001-993355	20011114
PRAI	US 1997-43321P	P	19970415		
	US 1998-60733	A1	19980415		

AB The present invention relates to a method of producing particles having a particle size of <100 nm and surface areas of at least 20 m²/g where the particles are free from agglomeration. The method involves synthesizing the particles within an emulsion having a 1-40% water content to form reverse micelles. In particular, the particles formed are metal oxide particles. The particles can be used to oxidize hydrocarbons, particularly methane.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 2 CA COPYRIGHT 2002 ACS

AN 121:137300 CA

TI preparation of heat-resistant BaAl₁₂O₁₉ combustion catalyst by solid-state reaction combined with sub-**micron** grinding

AU Imamura, S.; Ishida, S.; Ebata, E.; Tsurumi, K.; Nishikawa, T.; Tanaka, K.; Koshiga, I.

CS Dep. Chem., Kyoto Inst. Technology, Kyoto, 606, Japan

SO Reaction Kinetics and Catalysis Letters (1994), 52(1), 19-26

CODEN: RKCLAU; ISSN: 0304-4122

DT Journal

LA English

AB Heat-resistant barium hexaaluminate combustion catalyst was prepd. by a conventional solid-state reaction combined with sub-**micron** grinding. The barium hexaaluminate thus prepd. retained almost the same high surface area at high temps. as the one prepd. by the alkoxide method, exhibiting high activity in the catalytic combustion of methane.

=> s 12 and 14
L6 17 L2 AND L4

=> s 16 not 15
L7 16 L6 NOT L5

=> d bib,ab

L7 ANSWER 1 OF 16 CA COPYRIGHT 2002 ACS
AN 136:254318 CA
TI Vacuum UV-excited composite phosphor emitting persistent-luminescence
IN Arai, Kiyotaka; Tateiwa, Toshiaki; Oki, Yoshiko; Watanabe, Mie
PA Nichia Chemical Industries Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002080843	A2	20020322	JP 2000-312058	20001012
PRAI	JP 2000-199439	A	20000630		

AB The composite phosphor comprises 100 wt. parts of first phosphor grain coated with 0.5-100 wt. parts of second phosphor having sp. surface area 3-50 m²/g, wherein the second phosphor emits light having a peak at 200-450 nm wave length upon excitation by vacuum UV, and the first phosphor emits visible ray upon excitation by vacuum UV or light emitted from the second phosphor. The structure inhibits time-course deterioration of luminance of the first phosphor due to the second phosphor coating, and the phosphor composite is suitable for use in plasma display panels and high load fluorescent lamps, e.g., rare gas elec. discharge lamps.

=> d bib,ab 2-17

L7 ANSWER 2 OF 16 CA COPYRIGHT 2002 ACS
AN 133:108734 CA
TI Synthesis of barium hexaaluminate phosphors using combinatorial chemistry
AU Park, Eung Suk; Choi, Yoon Young; Sohn, Kee-Sun; Kim, Chang Hae; Park, Hee Dong
CS Display Phosphor Group, Korea Research Institute of Chemical Technology, Teajon, 305-600, S. Korea
SO Han'guk Seramik Hakhoechi (2000), 37(2), 134-139
CODEN: HSHAF7
PB Korean Ceramic Society
DT Journal
LA Korean
AB The main objective of the present investigation is to show the feasibility of combinatorial chem. by applying this method to phosphor syntheses. In this respect barium hexaaluminate phosphor was prepd. by the split-pool combinatorial method, which enabled much more rapid search of optimum compns. of target phosphors than conventional synthetic methods. Barium hexaaluminate phosphors doped with Eu²⁺ exhibit blue emission while those co-doped with Mn²⁺ and Eu exhibit green emission. Basically, the phosphor doped with 1.3 mol of Ba and 0.06-0.15 mol of Eu²⁺ exhibit the max. value of emission intensity at 435 nm. Under the UV and VUV excitations, the barium hexaaluminate phosphor co-doped with Mn²⁺ and Eu²⁺ shows strong green emission.

L7 ANSWER 3 OF 16 CA COPYRIGHT 2002 ACS
 AN 132:340695 CA
 TI Luminance saturation properties of PDP phosphors
 AU Okazaki, C.; Shiiki, M.; Suzuki, T.; Suzuki, K.
 CS Hitachi Central Research Laboratory, Kokubunji, Tokyo, Japan
 SO Journal of Luminescence (2000), 87-89, 1280-1282
 CODEN: JLUMA8; ISSN: 0022-2313
 PB Elsevier Science B.V.
 DT Journal
 LA English
 AB The authors studied the luminance satn. properties of 5 types of plasma display panel (PDP) phosphors under excitation by an ArF laser (wavelength: 193 nm, pulse width: 25 ns, and frequency: 10 Hz). The relation between luminance and excitation energy d. shows that all the phosphors exhibit luminance satn. above an excitation energy d. level of 0.2 mJ/cm²/pulse.
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 16 CA COPYRIGHT 2002 ACS
 AN 132:327323 CA
 TI Influence of flux on the structure and luminescence of the phosphor BaAl₁₂O₁₉:Mn
 AU Hong, Guangyan; Zeng, Xiaoqing; You, Hongpeng; Kim, Chang-hong; Pyun, Chong-hong; Park, Cheol-hee; Yu, Byung-yong; Bal, Hyun-sook; Kwon, Ii-fook
 CS Changchun Inst. Applied Chem., Chinese Acad. Sci., Changchun, 130022, Peop. Rep. China
 SO Faguang Xuebao (1999), 20(4), 311-315
 CODEN: FAXUEW; ISSN: 1000-7032
 PB Kexue Chubanshe
 DT Journal
 LA Chinese
 AB The phosphor BaAl₁₂O₁₉:Mn was synthesized by solid state reaction at 1300.degree. under the existence of flux. Its XRD diagram showed the intensity increased with the presence of the flux, the intensity of different crystal planes was changed with the flux, for example, crystal planes (102), (107), (114) and (205) became stronger, while crystal planes (0010) and (304) became weak. The flux not only helped to crystallize the host but also affected on growth of different crystal planes. The UV excitation spectrum consists of 3 bands peaking at 279 nm, 360.5 nm, 384.6 nm, which are due to the 6Al.fwdarw.4A₂(4F), 6Al.fwdarw.4E(4D), 6Al.fwdarw.4T₂(4D) of Mn²⁺ transitions, resp. Its photoluminescence spectra showed there is a stronger emission band peaking at 514 nm and a weak emission band peaking at 450 nm. The former band is assigned to Mn²⁺-emission, and the latter band may be origin from the host. The emission of Mn²⁺ ions indicated that Mn²⁺ ions occupy crystallog. site of Al in tetrahedral. Also the influence of different flux on the luminescent intensity of the phosphor BaAl₁₂O₁₉:Mn varied: H₃BO₃ decreased its luminescence, AlF₃ improved a little and BaF₂ improved greatly. The VUV excitation spectrum consists of the bands peaking around 150 nm and 195 nm that correspond to the host absorption and the 3d⁵.fwdarw.3d⁴4s1 Mn²⁺⁺ transition. This result reveals that there is an high efficient energy transfer from the host to the activator. The strong absorption at .apprx.150 nm also indicates that the phosphor BaAl₁₂O₁₉:Mn can act as a better candidate of PDP phosphors.

L7 ANSWER 5 OF 16 CA COPYRIGHT 2002 ACS
 AN 130:359143 CA

TI Phosphor layer and display device using it
IN Shiigi, Masatoshi; Okazaki, Choichirou; Furukawa, Tadashi
PA Hitachi, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11131059	A2	19990518	JP 1997-298151	19971030
AB	The layer contains phosphor particles which generates visible light by excitation of UV light with wavelength .ltoreq.200 nm and a material having optical absorption in a certain wavelength (not visible light). The device has the layer and an excitation source for generating UV light with wavelength .ltoreq.200 nm. The device gives good images with high contrast.				

L7 ANSWER 6 OF 16 CA COPYRIGHT 2002 ACS
AN 127:72431 CA

TI Synthesis and properties of Eu²⁺ activated blue phosphors
AU Ekambaram, S.; Patil, K. C.
CS Dep. Inorganic and Physical Chem., Indian Institute Science, Bangalore, 560 012, India

SO Journal of Alloys and Compounds (1997), 248(1-2), 7-12
CODEN: JALCEU; ISSN: 0925-8388

PB Elsevier

DT Journal

LA English

AB Blue phosphors Eu²⁺ activated BaMgAl₁₀O₁₇, BaMg₂Al₁₆O₂₇, xBa_{0.6}Al₂O₃ where x = 0.64-1.8 and LaMgAl₁₁O₁₉ were prep'd. by the combustion of corresponding metal nitrates (oxidizer) and carbohydrazide (CH)/diformyl hydrazine (DFH)/urea (fuel) redox mixt. at 400/500.degree. within 5 min. The phosphors were characterized by exposure to UV light, powder XRD, fluorescence and ESR spectroscopy. The phosphors showed a characteristic emission band at .lambda. = 435-462 nm when they were excited at 254 nm. With an increase in Ba content in xBa_{0.6}Al₂O₃ (x = 0.64-1.8) the emission band showed a red shift. Addn. of Mn²⁺ in Eu²⁺ doped Ba hexa aluminates and Eu²⁺ doped LaMgAl₁₁O₁₉ resulted in strong green emission at 515 nm. The fine particle nature of combustion derived phosphors was studied by powder d. (55-82% of theor. value), particle size (5.7-9.5 .mu.m) and BET surface area (5-22 m² g⁻¹) measurements.

L7 ANSWER 7 OF 16 CA COPYRIGHT 2002 ACS
AN 126:67211 CA

TI Fluorescent lamps, operating methods and liquid-crystal display apparatus
IN Saito, Miho; Nishimura, Kyoshi; Yuasa, Kunio
PA Toshiba Lighting & Technology, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08273620	A2	19961018	JP 1995-75615	19950331
AB	A cold cathode tubular lamp comprises: a quartz tube contg. Hg and Xe (<200 Torr); an outer and an inner phosphor layer activated by Hg UV (185 and 254 nm) and UV < 200 nm (Xe 147 and 172 nm)				

), resp.; and means for activating the inner phosphor initially, then increasing the Hg vapor pressure for activating the outer phosphor in leaching to a max. luminescence. The lamp is suitable for use as a backlight in liq. crystal display devices.

L7 ANSWER 8 OF 16 CA COPYRIGHT 2002 ACS
 AN 124:327510 CA
 TI Study on property of vacuum UV phosphors used in color plasma display panels
 AU Gu, Zhiqi; Liang, Yiyong
 CS Display Technology Inst., Hangzhou Univ., Hangzhou, 310028, Peop. Rep. China
 SO Gongneng Cailiao (1995), 26(Suppl.), 158-9
 CODEN: GOCAEA; ISSN: 1001-9731
 PB Gongneng Cailiao Bianjibu
 DT Journal
 LA Chinese
 AB The luminescent property, relative luminescent intensity and light decay property of the primary color vacuum UV phosphors (Y,Gd)BO₃:Eu (R), BaMgAl₁₄O₂₃:Eu (B), BaAl₁₂O₁₉:Mn (G) excited by 147 nm were discussed and the coating properties of three kinds of phosphors in device manufg. were compared. The exptl. results showed that the use of the three phosphors could obtained satisfactory display indexes.

L7 ANSWER 9 OF 16 CA COPYRIGHT 2002 ACS
 AN 121:241363 CA
 TI color-variable fluorescent lamps
 IN Yuasa, Kunio
 PA Toshiba Lighting & Technology, Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06076801	A2	19940318	JP 1992-230766	19920831

AB The title lamp, contg. Hg and rare gases, comprises a 1st and a 2nd phosphor layer emitting a 1st and a 2nd colored light via the excitations by the 185 and the 254 nm Hg line, resp.; and means for changing the intensity ratio between the 185 and the 254 nm line by changing the pulse-duty ratio or the bulb temp. The lamp typically changes the color continuously between greenish and reddish white.

L7 ANSWER 10 OF 16 CA COPYRIGHT 2002 ACS
 AN 113:45105 CA
 TI Preparation and microstructure of porous hexaaluminate ceramics
 AU Machida, Masato; Sirouzu, Masaki; Eguchi, Koichi; Arai, Hiromichi
 CS Grad. Sch. Eng. Sci., Kyushu Univ., Kasuga, 816, Japan
 SO Nippon Seramikkusu Kyokai Gakujutsu Ronbunshi (1990), 98(6), 554-60
 CODEN: NSKRE2; ISSN: 0914-5400
 DT Journal
 LA Japanese
 AB Heat-resistant porous ceramics were prepd. by sintering sol-gel-derived hexaaluminate fine powders at 1200-1600.degree.. Although the sintered samples showed high porosities (50%), the N₂ permeability was low because of small pore size (<100 nm). The packing of planar particles of hexaaluminate formed 2 kinds of peaks in their pore-size distribution at <10 nm and 100 nm. Second-stage sintering of the crushed powders significantly enhanced the N₂ permeability. In the

samples after 2-stage sintering, the loose packing of large agglomerates formed macropores ($>10 \mu\text{m}$) besides the voids of primary particles. The macropores are effective for high gas permeation. Consequently, the 2nd-step sintering of hexaaluminate gave a mixed structure of micropores and macropores, which is a possible microstructure for application to filtration catalysts.

L7 ANSWER 11 OF 16 CA COPYRIGHT 2002 ACS

AN 103:150695 CA

TI Fluorescent lamp

PA Toshiba Corp., Japan

SO Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60024151	B4	19850611	JP 1976-31359	19760324

AB A fluorescent lamp is obtained by coating the inner walls of a discharge tube with a mixt. of a Eu-activated rare earth oxysulfide phosphor emitting in the red (600-640 nm), a Tb-activated rare earth oxysulfide phosphor emitting in the yellow-green (530-570 nm), and a Tm-activated rare earth oxysulfide phosphor emitting in the blue (430-480 nm) region. The blue-emitting component may be Sr halophosphate:Eu or Ba aluminate:Eu. White light-emitting fluorescent lamps are obtained by mixing red-, green-, and blue-emitting phosphors. When using RE₂O₂S:Eu [RE = rare earth] as the red-emitting phosphor and RE₂O₂S:Tb as the green-emitting phosphor, a white light-emitting fluorescent lamp with high color rendition and efficiency is obtained.

L7 ANSWER 12 OF 16 CA COPYRIGHT 2002 ACS

AN 93:15928 CA

TI Refractive index and optical absorption of barium hexaaluminate BaAl₁₂O₁₉

AU Enke, K.; Mateika, D.

CS Forschungslab., Philips G.m.b.H., Hamburg, D-2000/54, Fed. Rep. Ger.

SO Journal of Materials Science (1980), 15(4), 1066-7

CODEN: JMTSAS; ISSN: 0022-2461

DT Journal

LA English

AB Optical absorption and n measurements on Ba_{1-x}Al₁₂+(2/3)xO₁₉ (x = 0.1-0.2) single crystals showed a very high band gap ($E_2 \approx 6.1 \text{ eV}$ according to $\lambda_g \approx 205 \text{ nm}$), whereas the n and the dispersion as well are rather low. Birefringence measurements were carried out in the visible region with a $100 \mu\text{m}$ thick sample using conventional ellipsometric methods by means of a Leitz microscope.

L7 ANSWER 13 OF 16 CA COPYRIGHT 2002 ACS

AN 91:82024 CA

TI New tricolor phosphors for gas discharge display

AU Koike, Junro; Kojima, Takehiro; Toyonaga, Ryuya; Kagami, Akiyasu; Hase, Takashi; Inaho, Shuji

CS Tech. Res. Lab., Nippon Hoso Kyokai, Tokyo, Japan

SO Journal of the Electrochemical Society (1979), 126(6), 1008-10

CODEN: JESOAN; ISSN: 0013-4651

DT Journal

LA English

AB The properties of phosphors under vacuum UV excitation were studied to develop tricolor phosphors for use in gas discharge panels to reproduce color TV pictures. The excitation spectra at 100-300 nm and the

radiant efficiency of the phosphors incorporated with exptl. gas discharge cells were detd. Based on these results, (Y,Gd)BO₃:Eu³⁺ (red), BaAl₁₂O₁₉:Mn (green), and BaMgAl₁₄O₂₃:Eu²⁺ (blue) were selected as the new tricolor phosphors which bring high white luminance and wide color gamut to the color picture display panel.

L7 ANSWER 14 OF 16 CA COPYRIGHT 2002 ACS
AN 81:70539 CA
TI Fluorescence in .beta.-aluminum oxide-like materials of potassium, barium, and lanthanum activated with europium(2+) and manganese(2+) ions
AU Tamatani, Masaaki
CS Toshiba Res. Dev. Cent., Tokyo Shibaura Electr. Co., Ltd., Kawasaki, Japan
SO Japanese Journal of Applied Physics (1974), 13(6), 950-6
CODEN: JJAPA5; ISSN: 0021-4922

DT Journal

LA English

AB In-corporation of Mn²⁺ and Eu²⁺ ions in .beta.-alumina-like host crystals was studied. Under uv excitation, both BaO.6Al₂O₃:Eu, Mn, and La₂O₃.11Al₂O₃:Eu, Mn show intense green fluorescence caused by the energy transfer from Eu²⁺ to Mn²⁺. The efficiency of the luminescence is comparable to that of Zn₂SiO₄:Mn when excited by 254 nm light. Emission and excitation spectra of the phosphors were compared with those of KAl₁₁O₁₇. The difference in the at. packing in the mirror plane of these aluminates appears to be reflected in the emission spectra of Mn²⁺. The quenching temp. for the sensitized fluorescence of Mn²⁺ is governed by the Eu²⁺ ions, replacing mono-, di-, or tri-valent large cations in these compds.

L7 ANSWER 15 OF 16 CA COPYRIGHT 2002 ACS
AN 81:70533 CA
TI Depreciation of .beta.-aluminum oxide-like phosphors under ultraviolet irradiation

AU Tamatani, Masaaki

CS Toshiba Res. Dev. Cent., Tokyo Shibaura Electric Co., Ltd., Kawasaki, Japan

SO Japanese Journal of Applied Physics (1974), 13(6), 957-65
CODEN: JJAPA5; ISSN: 0021-4922

DT Journal

LA English

AB The effects of uv irradiation on the photoluminescence intensity of the .beta.-alumina-like phosphors were investigated. The 185 nm irradiation produces a broad absorption band, due to color centers, in the uv region. Decrease in the fluorescence intensity of both BaO.6Al₂O₃:Eu, Mn, and La₂O₃.11Al₂O₃:Eu, Mn is attributed to the absorption of part of the excitation energy by the color centers. The irreversible photoionization of Eu²⁺ to Eu³⁺ ions is responsible for the depreciation of KAl₁₁O₁₇:Eu without color center formation under the 254 nm irradiation. Most of the depreciation can be interpreted solely in terms of the induced reduction of Eu²⁺ absorption bands in the uv region. In KAl₁₁O₁₇:Eu, Mn, the 254 nm irradiation causes depreciation due to the nonradiative decay of the Mn²⁺ excited states, in addition to that due to the photoionization of Eu²⁺. Diffusion of ions and/or vacancies may participate in the irreversible photoionization.

L7 ANSWER 16 OF 16 CA COPYRIGHT 2002 ACS
AN 73:104217 CA
TI Luminescent materials
PA Philips Electronic and Associated Industries Ltd.
SO Brit., 6 pp.
CODEN: BRXXAA

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1190520		19700506		
PRAI	NL		19671122		
AB	For many photochem. document-copying systems, a paper is required which is sensitive to the transmitted, or reflected radiation used. A further requirement is that the sensitivity is to uv rather than visible wavelength radiation. The majority of such systems use a Hg vapor discharge lamp including a luminescent layer provided on a support, the function of which is to convert the low wavelength radiation to 380-440 nm. The patent describes a luminescent material of formula $BaxSryCazEupAl12O19$ where $x + y + z + p = 1$; 1 or 2 of the parameters x, y, and z may equal zero and $0.1 \geq p \geq 0.001$. $Ba1-pEupAl12O19$ (I) has the highest conversion efficiency, the best temp. dependence and a max. emissivity at the longest wavelength (435 nm). I is satisfactorily excited by the 365- as well as the 254-nm. Hg line. Only slight effects of oxidn. have been noted. TiO_2 may be used as a reflecting layer between the support and the luminescent material. Eight examples are given; for each, radiation intensity curves with both wavelength and temp. are drawn.				